CLAIM AMENDMENTS:

Please amend Claim 1:

1. (Currently Amended): An image pickup apparatus comprising:

a plurality of pixels; ~~and~~

a color filter array of four colors disposed on said plurality of pixels, wherein said color filter array has a periodicity of two rows x two columns;; and

an operation circuit which provides at least two different color difference signals on the two rows x two columns basis,

wherein colors of color filters in a periodical unit of two rows x two columns are all different from each other and have fixed positions.

2. (Previously presented): An image pickup apparatus according to claim 1, wherein the color filters in the periodical unit include a filter for transmitting only green light in a visible light range, a filter for intercepting only blue color in the visible light range, a filter for intercepting only green light in the visible light range, and a filter for intercepting only red light in the visible light range.

3. (Previously presented): An image pickup apparatus according to claim 1, further comprising a first operation unit which performs an operation of A + B - C - D, where A, B, C, and D represent signals picked up from an area of two rows x two columns.

4. (Original) An image pickup apparatus according to claim 3, wherein the signals A and B are disposed on a same line or on a same column, and the signals C and D are disposed on a same line or on a same column.

5. (Previously presented): An image pickup apparatus according to claim 3, further comprising a second operation unit which performs an operation of A + C - B - D.

6. (Original) An image pickup apparatus according to claim 5, wherein the signals A and B are disposed on a same line or on a same column, and the signals C and D are disposed on a same line or on a same column.

7. (Previously presented): An image pickup apparatus according to claim 1, further comprising:

a first read-out unit which reads out a difference between: (a) an addition signal of a first row, first column signal and a first row, second column signal, and (b) an addition signal of a second row, first column signal and a second row, second column signal, in an area of two rows x two columns, and

a second read-out unit which reads out a difference between: (a) an addition signal of a first row, first column signal and a second row, first column signal, and (b) an addition signal of a first row, second column signal and a second row, second column signal, in the area of two rows x two columns.

8. (Previously presented): An image pickup apparatus according to claim 7, wherein areas of two rows x two columns are disposed without any space therebetween.

9. (Previously presented): An image pickup apparatus according to claim 1, further comprising a read-out unit that reads out an addition signal of all signals in an area of four rows x one column.

10. (Previously presented): An image pickup apparatus according to claim 1, further comprising a read-out unit that reads out an addition signal of all signals in an area of one row x four columns.

11 - 37. (Cancelled)

38. (Previously presented): A color filter array having a periodicity of two rows x two columns, wherein colors of color filters in a periodical unit of two rows x two columns are all different from each other and have fixed positions.

39. (Previously presented): A color filter array according to claim 38, wherein the color filters in the periodical unit include a filter for transmitting only green light in a visible light range, a filter for intercepting only blue color in the visible light range, a filter for intercepting only green light in the visible light range, and a filter for intercepting only red light in the visible light range.